

16th February 2015

Attn: Emerging Payments Task Force
Conference of State Bank Supervisors
1129 20th Street NW
9th Floor Washington, D.C. 20036

Re: Draft Model Regulatory Framework for Virtual Currency Regulatory Regimes

Dear Members of the Task Force:

Epiphyte Corporation ('Epiphyte') respectfully submits the following comments on the CSBS Policy on State Virtual Currency Regulation ('Policy') and the Draft Model Regulatory Framework ("Draft Framework") for state virtual currency regulatory regimes. Epiphyte appreciates the opportunity to comment upon the issues raised in the Draft Model Regulatory Framework.

About Epiphyte

Epiphyte provides financial institutions with the software, documentation, analysis and deep subject matter expertise required to identify the optimal integration and use cases for distributed ledger technology. Epiphyte helps its customers identify low risk, high impact business cases and minimize the need to change workflows to take advantage of the technology. By leveraging our offering, our clients are better positioned for increased financial flows and asset creation as a result of a beneficial integration with crypto-financial networks.

Regulatory Clarity & Uniform Risk-Based Approach

Epiphyte recognizes the challenge in developing a model regulatory framework which allows for both flexibility to adapt regulation and oversight to yet unforeseen changes especially due to the continued evolving nature of virtual currency business models. We appreciate the approach you have taken at the Conference of State Bank Supervisors ('CSBS') to stress the importance of facilitating and not inhibiting continued innovation while addressing risk. Overall, your approach is more methodical and an improvement from that taken by U.S. state-level regulatory proposals which have included state-level AML reporting while excluding non-financial uses of the technology.

Regulatory clarity and consistency is key to exploiting the benefits of digital currencies and, more importantly, the distributed ledgers of which certain digital currencies, such as Bitcoin, are an emergent property ('Distributed Ledger Technology'). This clarity is needed for regulators and the public alike, to advance the banking or financial services sector. Indeed, Distributed

Ledger Technology is extremely powerful and may ultimately lead to a suite of new financial services and products. It provide benefits far beyond that of digital currencies. Arguably, it has already begun to change our overall approach to traditional finance. The absence of regulatory clarity and uniform regulatory and/or statutory requirements, will inhibit the exploitation of Distributed Ledger Technology and in turn the US economy.

There must be sufficient flexibility for banking and financial services technologies, which represent an evolution and do not readily fit within existing statutory, regulatory, and/or supervisory regimes, to be exploited in the marketplace while at the same time ensuring:

- a. consumer protection,
- b. market stability, and
- c. law enforcement.

As pointed out by you, there must be regulatory flexibility to accommodate different activity levels and business models and to avoid inhibiting innovation. By states clarifying their existing laws, for example by interpretative rulings, guidance or amendment, such flexibility can be created to strike a balance between setting clear rules and providing flexibility. As you have indicated, financial services regulations already exist in most state laws, generally covering the transmitting, exchanging, and/or holding of value on behalf of another. Where no state laws exist, for example that deal with money transmission, the real issue is whether regulations should be drafted on a state level to deal with this type of activity since the states laws may be archaic. In this context, digital currencies and Distributed Ledger Technology has triggered an examination of absent or obsolete financial services laws which may have been passed pre-internet versus a need for digital currency or technology specific regulation. Moreover, it does not make sense to have banking and financial services, which pose the same risks, regulated in a different way because they are delivered (to consumers) using a new financial technology. We want to stress that a bespoke regulatory regime for digital currencies and banking and financial services which exploit Distributed Ledger Technology will be unduly burdensome and will serve to regulate the utility out of this new invention since it is still early days.

We believe that regulations should be uniform and proportionate to risk-assessment weighed against the benefit of any new technology. A failure to differentiate between the unique risks of each potentially regulated activity will stifle innovation and hamper statutory objectives.

Definitions: Digital vs Virtual Currencies; Transmission

In order to obtain regulatory clarify, the scope of the Draft Framework must be clear. This means usage of appropriate and applicable definitions and verbiage. Because this is an emerging area, varying language has been used. The Policy refers to “virtual currencies” as digital representations of value that can be a medium of exchange, a unit of account, and/or a store of value. It states that “virtual currencies include, but are not limited to digital currencies

and crypto-currencies such as Bitcoin”. However, while virtual currencies are a type of digital currency, not all digital currencies are virtual. Bitcoin is a digital or crypto-currency. Virtual currencies may refer to units in the virtual world of an online game which have no real world value. The scope of the Draft Framework should not extend to the activity of a videogame developer which stores its in-game currency for trading between players.

Clarity is needed for the term “transmission” which appears to include all activities conducted by any entity on behalf of another. This would include transfers through processor, card and bank networks that fund digital currency wallets. Clarification is needed that that individual wallet holders, software providers, and third party processors, card networks and banks were not intended to be included in the definition of “transmissions.” Similarly that multi-signature transaction based escrow services are not deemed transmitters. Consistent with FinCEN guidance, regulations should specifically exempt from any money transmitter status a person that only provides the delivery, communication, or network data access services used by a money transmitter to supply money transmission services.

Technological Innovations

The true value of digital currencies, such as Bitcoin and XRP, lies in the transaction networks on which they are part, powered by the innovation of distributed ledgers (DL). DL protocols create decentralized transaction networks. These networks not only minimize operational risk of failure but also ease and facilitate third-party application integration, protected by best-in-class security protocols. Below are what we believe to be the key innovative features of DL.

Features
<ul style="list-style-type: none"> • Asset-agnostic • Enhanced security • System interoperability • Increased transaction speed • Data standardization • Information ownership and control • Machine-managed contracts (“Smart Contracts”) • Automation of clearing and settlement of payments

The above combination of features is unique to DL-based systems and, as a result, has the potential to provide the following benefits to different stakeholders:

Actors	Benefits
Consumers	Access to banking service Convenience Enhanced user experience

Business	Improved funds management Reduced overhead Operational efficiency gains Resource optimization
Financial Institutions	Complete cash flow visibility Reduced cost per transaction Eliminated settlement risk Eliminated counterparty risk
Government	Unprecedented transparency and oversight New market opportunities Economic growth Increased employment opportunities
Wider Economy	New market opportunities Economic growth Increased employment opportunities Increased monetary and fiscal stability Reduced systemic risk

These technological innovations present several opportunities by enabling stakeholders to leverage new technologies these benefits for more effective processes and outcomes.

We believe that government agencies and regulators should work with financial institutions to explore digital currency and distributed ledger technology use cases. This may be through a pilot between two financial institutions and a company such as Epiphyte to observe its digital currency agnostic software solution which can be used to:

1. Offer a variety of convenience services such as buying air miles and mobile top-ups
2. Provide a low cost payment system which can be used by the financial institutions which to date remain the trusted provider for asset custodial services
3. Allow the financial institution adhere to regulatory thinking that financial institutions should not buy, hold or sell digital currencies
4. Reduce regulatory overhead and cost of compliance
5. Meet compliance requirements under AML regulations with respect to digital currencies and associated technologies

Activities to be Regulated

We commend your exclusion of non-financial activities which that are non-financial services in nature but utilize Distributed Ledger Technology. The examples cited by you are:

- a. merchants and consumers who use digital currencies solely for the purchase or sale of goods or services.
- b. a cryptography-based distributed ledger system for non-financial recordkeeping would be outside the scope of this Policy

We suggest that is it made clear that there is no intention to regulate software development which is also excluded from the Draft Framework. The New York Department of Financial

Services ('NYDFS') has provided such clarity in its revised draft proposed framework or "BitLicense" regulations (DFS-29-14-00015-P, "Regulation of the conduct of virtual currency businesses") made publicly available on 04 February 2015 which states that: "The development and dissemination of software in and of itself does not constitute Virtual Currency Business Activity."

Covered activities of the Draft Framework include the exchange, transmission, holding and/or control of digital currencies. This would necessarily include third party services such as wallets, merchant acquirers, payment processors and kiosks, such as Bitcoin ATMs. We suggest that "activities-based regulation" as proposed should:

- a. center around true custodianship of digital currencies. Those who facilitate the trade or exchange of digital assets, including digital currencies, should not be held to the same standard or same requirements as though who facilitate transactions but not take custody of digital assets. Businesses engaged in storing, holding, or maintaining custody of digital currency on behalf of others should not have the same regulatory requirements as a privately-held company that buys or sells digital currencies for its own investment purposes. Additionally, those who provide security, code or offer other non-custodial services, and process payments should not be deemed to be engaging in covered activities under the Draft Framework.

A thorough understanding of what constitutes custodianship is also necessary consistent with the properties of Distributed Ledger Technology. Software wallet providers do not control digital currencies managed by their software. Where software wallets such as Blockchain¹ use a model by which the digital currency hosted can never be accessed by that wallet provider, they should not be considered custodians. In such cases the service provider has unencrypted access to the keys necessary to transmit the currency. Moreover, there is the technological innovation of multisignature wallets, whereby multiple signatures from keys generated and held by multiple people are required to conduct a transaction. Holding a key may not mean access to the digital currency but may mean that if the owner lost one of his two keys, he could ask the holder of the third key to sign a transaction to move value into his wallet. In this way, the third party key holder is involved in custody of the digital currency but never takes custody of it.

- b. be under the existing regulatory regime so that the provision of financial services or products should be regulated as "activities-based" rather than "technology-based". It does not make sense to have banking and financial services, which pose the same risks, regulated in a different way because they are delivered to customers using a new financial technology.

¹Available at www.Blockchain.info

Licensing

Financial institutions are already subject to extensive scrutiny. The Draft Framework should clarify and declare banks eligible to engage Covered Activities without any additional licensing unless specifically disallowed by the state regulator.

Denomination of Capital, Permissible Investments, and Bond Coverage

For financial services companies dealing in digital currencies, safety funds may be denominated in either the applicable digital currency or in dollars. Permissible investments, capital reserves and surety bonds can be based on the market value of the underlying digital asset and companies dealing in digital currencies should not be prevented from denominating safety fund in such digital currencies. By adopting a flexible approach to reserve requirements, bonding, and flexible permissible investment requirements, the regulatory goal can be accomplished of consumer protection on the one hand and removing barriers to entry on the other. For example, states may wish to determine the proportion held in each type of investment.

Distressed or Failed Companies

Again, requirements in the Draft Framework to provide regulators with tools for dealing with distressed or failed companies should center on custodianship of digital assets including digital currencies. State laws already provide for corporate financial distress and/or failure. Similar to the current position where entities that provide financial services and are custodians on behalf of consumers have certain regulatory capital requirements, so too can there be similar capital requirements for such entities which provide financial services and are custodians of digital currencies. However, capital requirements should not be imposed merely because the entity used Distributed Ledger Technology to provide its services. In the event of any type of bond and/or capital requirements, a clear methodology should exist to provide clear guidelines for and expectations of subject entities.

Training and Education

Educating regulators about digital currency business activities and business models is an important part of building a responsive and robust regulatory structure. However of more importance is understanding the nature of Distributed Ledger Technology. With this understanding, regulators will be best positioned to determine the best way forward including with licensing processes as applicable.

You have asked what education resources are available and we would suggest that due to nascence of the technology, the best source of education and training is from known SROs such as the Digital Asset Trade Authority ('DATA') and distributed ledger network companies, such as Epiphyte.

Given the global nature of digital currencies and Distributed Ledger Technology, we would also recommend that the examination of regulatory publications as a resource is not confined to US

regulators. European regulators have been active to publish several analyses² on the potential benefits and risks of digital currencies and Distributed Ledger Technology.

There is also a wealth of other online resources, especially:

- *Bitcoin: A Peer-to-Peer Electronic Cash System*, 2008³ which details methods of using a peer-to-peer network to generate what was described as "a system for electronic transactions without relying on trust"
- White papers of various protocols, such as Ripple, Ethereum,
- White papers of interested parties, such as the recently published CryptoCurrency Security Standard (CCSS)⁴ by the CryptoCurrency Certification Consortium (C4)

Extensive training and education at all levels are needed, so that regulators can more effectively deal with our new digital reality and overcome any apprehensions of regulating in an environment driven by new technology.

Financial Institutions & Risk Mitigation

We believe it is essential that there is a non-regulatory approach of technology so that innovation is not stifled. In keeping with this approach US Government agencies and regulators should work with financial institutions to explore digital currency use cases. Our recommendation for institutions looking to experiment with digital currencies and distributed ledgers, is not to integrate directly but work with third party vendors, who are able to provide a gateway layer for added protection against system vulnerability.

This may be through a pilot between two financial institutions and a company such as Epiphyte to observe or test its digital currency agnostic system. These use cases and learning can be used to develop comprehensive guidance for the sector which remains in its infancy. Moreover, the US will be best positioned to the global crypto-finance hub if, combined with its leading financial services market, there are favorable US tax laws for digital currencies, progressive corporation tax laws and payment services regulation.

BSA/AML

The revised FFIEC Bank Secrecy Act/Anti-Money Laundering (BSA/AML) Examination Manual ('the 2014 manual') provides that BSA requirements and supervisory expectations for providing banking services to administrators or exchangers of virtual currencies are the same as money transmitters. This seeks to clarify supervisory expectations and incorporate regulatory changes

² See for example:

(a) European Banking Authority Opinion On 'Virtual Currencies', EBA/Op/2014/08, 5 July 2014;

(b) Robleh Ali, John Barrdear, Roger Clews, James Southgate, Bank of England Quarterly Bulletin 2014 Q3, p.1, "Innovations in payment technologies and the emergence of digital currencies," available at [www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q3digitalcurrenciesbitcoin1 .pdf](http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q3digitalcurrenciesbitcoin1.pdf);

(c) Robleh Ali, John Barrdear, Roger Clews, James Southgate, Bank of England Quarterly Bulletin 2014 Q3, p.1, "The economics of digital currencies," available at

<http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q3digitalcurrenciesbitcoin2.pdf>

³ Nakamoto, S (2008), Bitcoin: a peer-to-peer electronic cash system, available at <https://bitcoin.org/bitcoin.pdf>.

⁴ <https://crypticonsortium.org/standards/CCSS>

with respect to digital currencies. Notwithstanding, the reality is that regulators must tackle the challenge of evolved authentication and identity technologies since it is now possible to authenticate identities without revealing identities. State and federal exam procedures must continuously be adapted to new technology in fight against money laundering in this new digital currency age and with respect to new methods of detecting BSA/AML activity.

Customer Identification

The Draft Framework includes maintaining records on the identification of virtual currency owners. Credentialing consumers for identification purposes can be accomplished to varying degrees, but requiring businesses to know the recipient of every digital currency transaction is an overreach and is neither workable nor helpful. It may make sense if businesses are required to identify their own customers. However to require KYC of all parties to a transaction is unfeasible.

Technological Solutions to Improve Supervision

Distributed Ledger Technology presents enormous potential for enhanced governance and regulatory oversight, due to every transaction on the distributed or decentralized network being recorded on a public ledger in real-time. This allows for an automated immutable audit trail, with real time cash/value and risk exposure visibility. Distributed Ledger Technology brings a level of financial transparency that has never before been possible, with the potential to empower regulators with tools and predictive ability far beyond what is available today. The technology itself can be used as a solution which regulators and licensees can deploy to close information gaps in a manner that makes the supervisory process more efficient and “real time”.

Conclusion

Epiphyte thanks the CSBS for its efforts in formulating this Policy and Draft Framework. We applaud the CSBS for soliciting and listening to comments from experts and operators within the industry.

Since, at the state level, there is a patchwork of conflicting regulations and statutory interpretations, we particularly appreciate the aim of the CSBS to create regulatory clarity and formulate a uniform approach. This may ultimately assist in reducing regulatory delays which face start-ups and other entities as they seek to roll out their services nationwide.

The advent of Distributed Ledger Technology can be compared to the invention and commercialization of the internet itself. In hindsight, we can see that the benefits provided far outweighed the disadvantages but in the early days we could not have imagined the extent of its utility and global usage. We believe that the regulatory efforts represented by the Policy and

Draft Framework can be central to the evolution of the banking and finance sector and exploitation of Distributed Ledger Technology. However, without further articulation or a balanced approach, new models, products, services and ventures will fail to emerge to the disservice of the consuming public.

We hope our comments are helpful and we would be happy to engage further with the CSBS and stakeholders in this respect.

Sincerely,

A handwritten signature in black ink that reads "Gabrielle Atack". The signature is written in a cursive style and is underlined with a single horizontal line.

Co-Founder & General Counsel
Epiphyte Corporation